

What Is Claimed Is:

1. An electronic paper printer for describing display patterns on electronic paper, comprising:

a plurality of capsules inside of which charged particles move, whereby colors are changed and display patterns are displayed; and

a head for describing display patterns on said electronic paper; wherein:

said charged particles inside said capsules are caused to move by applying an electric field to said electronic paper; and

portion of said head which contacts said electronic paper is given a curved shape.

2. The electronic paper <sup>printing system</sup> ~~printer~~ according to claim 1, wherein said head is configured by at least a pair of drums.

3. The electronic paper printer according to claim 2, wherein at least one drum of said pair of drums has, on outer circumferential surface thereof, a plurality of pixel electrodes that form electric fields that are applied to said electronic paper.

4. The electronic paper printer according to claim 2, wherein one drum of said pair of drums has, on outer circumferential surface thereof, a plurality of pixel electrodes that form electric fields that are applied to said electronic paper, and other drum thereof

has, on outer circumferential surface thereof, a common electrode that forms said electric fields together with said pixel electrodes.

5. The electronic paper <sup>printing system</sup> ~~printer~~ according to claim 3 or 4, wherein said plurality of pixel electrodes is deployed in a matrix arrangement.

6. The electronic paper <sup>printing system</sup> ~~printer~~ according to claim 3, 4, or 5, having a plurality of switching elements that can switch between forming and extinguishing the electric fields produced by the plurality of pixel electrodes.

7. The electronic paper <sup>printing system</sup> ~~printer~~ according to claim 6, wherein said switching elements are thin film transistors.

8. An electronic paper printer for describing display patterns on electronic paper, comprising:

a plurality of capsules inside of which charged particles move, whereby colors are changed and display patterns are displayed; and

a drum-shaped head for describing display patterns on said electronic paper; wherein:

said charged particles inside said capsules are caused to move by applying an electric field to said electronic paper; and

configuration is such that said display patterns are

a single electrode on outer circumferential surfaces thereof.

*printing system*  
~~11~~ 13. The electronic paper ~~printer~~ according to claim ~~11~~,<sup>10</sup>  
 wherein at least one head of said describing head and said erasing  
 head is configured by a pair of drums.

5 ~~Sub B~~ 14. The electronic paper printer according to claim 13,  
 wherein at least one drum of said pair of drums has, on outer  
 circumferential surface thereof, a plurality of pixel electrodes  
 that form electric fields that are applied to said electronic paper.

10 15. The electronic paper printer according to claim 13,  
 wherein one drum of said pair of drums has, on outer circumferential  
 surface thereof, a plurality of pixel electrodes that form electric  
 fields that are applied to said electronic paper, and other drum  
 thereof has, on outer circumferential surface thereof, a common  
 electrode that forms said electric fields together with said pixel  
 15 electrodes.

*printing system*  
~~14~~ 16. The electronic paper ~~printer~~ according to claim ~~14~~ or ~~15~~,<sup>12</sup>  
 wherein said plurality of pixel electrodes is deployed in a matrix  
 arrangement.

*printing system*  
~~15~~ 17. The electronic paper ~~printer~~ according to claim ~~14~~, ~~15~~,<sup>12</sup>  
 or ~~16~~, having a plurality of switching elements that can switch  
 between forming and extinguishing said electric fields produced  
 by said plurality of pixel electrodes.

*printing system*  
~~16~~ 18. The electronic paper ~~printer~~ according to claim ~~17~~,<sup>15</sup>

wherein said switching elements are thin film transistors.

19. An electronic paper printer for describing display patterns on electronic paper, comprising:

a plurality of capsules inside of which charged particles move, whereby colors are changed and display patterns are displayed; and

an overwrite-capable head for describing display patterns on said electronic paper; wherein:

said charged particles inside said capsules are caused to move by applying an electric field to said electronic paper; and

portion of said head which contacts said electronic paper is given a curved shape.

20. The electronic paper printer according to claim 19, wherein said head has a pair of drums, and each drum of said pair of drums has, on outer circumferential surface thereof, a plurality of pixel electrodes that form electric fields that are applied to said electronic paper.

21. The electronic paper printer according to claim 19, wherein said head has a pair of drums, and one drum of said pair of drums has, on outer circumferential surface thereof, a plurality of pixel electrodes that form electric fields that are applied to said electronic paper, and other drum thereof has, on outer

described by patterns applied from said head to said electronic paper.

9. The electronic paper printer according to any one of claims 1 to 8, wherein said head has an erasing head for erasing display patterns described on said electronic paper and a describing head for describing display patterns on said electronic paper.

10. The electronic paper printer according to any one of claims 1 to 8, wherein said head is configured so that overwriting is possible.

11. An electronic paper printer for describing display patterns on electronic paper, comprising:

a plurality of capsules inside of which charged particles move, whereby colors are changed and display patterns are displayed;

a describing head for describing display patterns on said electronic paper; and

an erasing head for erasing display patterns described on said electronic paper; wherein:

portion or portions of said describing head and/or said erasing head that contact said electronic paper are given a curved shape.

12. The electronic paper printer according to claim 11, wherein said erasing head is configured by a pair of drums having

circumferential surface thereof, a common electrode that forms said electric fields together with said pixel electrodes.

22. The electronic paper printer according to claim 21, configured such that two electric fields oriented in different  
5 directions between said common electrode and said pixel electrodes can be selectively formed by setting electrical potential of said common electrode at a prescribed value.

~~Sub 42~~ 23. The electronic paper printer according to any one of  
claims 20, 21, or 22, wherein said plurality of pixel electrodes  
10 is deployed in a matrix arrangement.

24. The electronic paper printer according to any one of  
claims 20 to 23, having a plurality of switching elements that can  
switch between forming and extinguishing said electric fields  
produced by said plurality of pixel electrodes.

15 25. The electronic paper printer according to claim 24,  
wherein said switching elements are thin film transistors.

~~Sub 43~~ 26. The electronic paper printer according to any one of  
claims 1 to 25, wherein said electronic paper has a base layer and  
an electronic ink layer, and said plurality of capsules is dispersed  
20 in said electronic ink layer.

~~Sub 44~~ D1